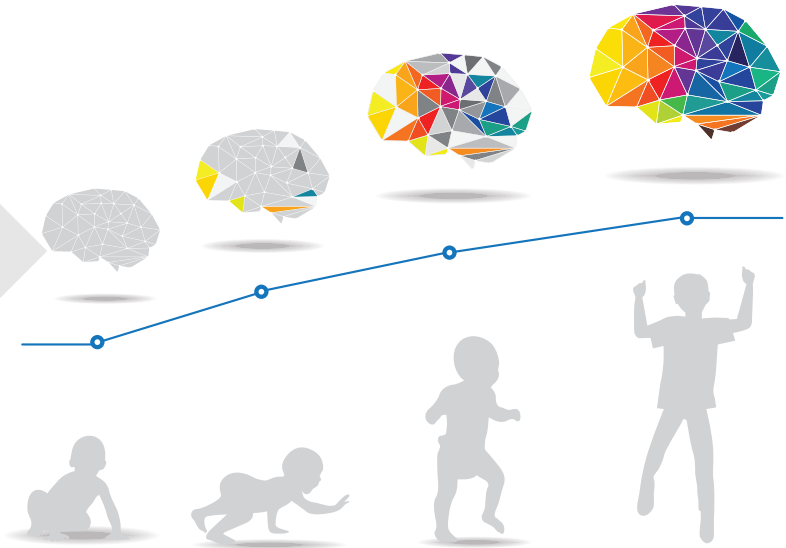


# THE TEEN BRAIN: 6 THINGS TO KNOW

DID YOU KNOW THAT **BIG AND IMPORTANT CHANGES ARE HAPPENING TO THE BRAIN DURING ADOLESCENCE?** HERE ARE **6 THINGS TO KNOW ABOUT THE TEEN BRAIN:**

## 1 YOUR BRAIN DOES NOT KEEP GETTING BIGGER AS YOU GET OLDER.

For girls, the brain reaches its largest physical size around 11 years old and for boys, the brain reaches its largest physical size around age 14. Of course, this difference in age does not mean either boys or girls are smarter than one another!

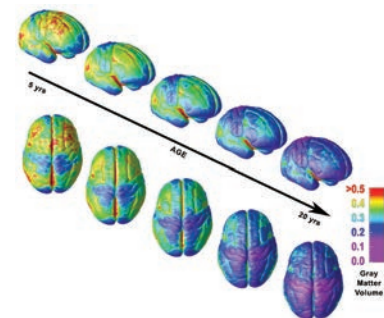


## 2 BUT THAT DOESN'T MEAN YOUR BRAIN IS DONE MATURING.

For both boys and girls, although your brain may be as large as it will ever be, your brain doesn't finish developing and maturing until your mid- to late-20s. The front part of the brain, called the prefrontal cortex, is one of the last brain regions to mature. It is the area responsible for planning, prioritizing and controlling impulses.

## 3 THE TEEN BRAIN IS READY TO LEARN AND ADAPT.

In a digital world that is constantly changing, the adolescent brain is well prepared to adapt to new technology—and is shaped in return by experience.

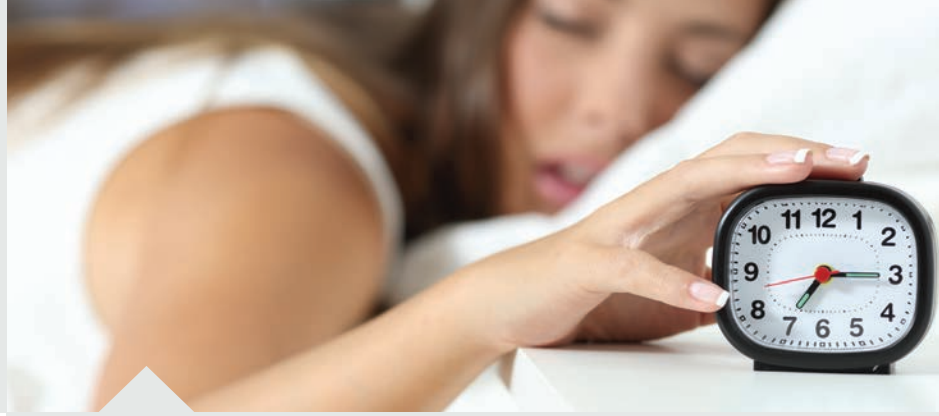


## 4 MANY MENTAL DISORDERS APPEAR DURING ADOLESCENCE.

All the big changes the brain is experiencing may explain why adolescence is the time when many mental disorders—such as schizophrenia, anxiety, depression, bipolar disorder, and eating disorders—emerge.

## 5 THE TEEN BRAIN IS RESILIENT.

Although adolescence is a vulnerable time for the brain and for teenagers in general, most teens go on to become healthy adults. Some changes in the brain during this important phase of development actually may help protect against long-term mental disorders.



## 6 TEENS NEED MORE SLEEP THAN CHILDREN AND ADULTS.

Although it may seem like teens are lazy, science shows that melatonin levels (or the “sleep hormone” levels) in the blood naturally rise later at night and fall later in the morning than in most children and adults. This may explain why many teens stay up late and struggle with getting up in the morning. Teens should get about 9-10 hours of sleep a night, but most teens don't get enough sleep. A lack of sleep makes paying attention hard, increases impulsivity and may also increase irritability and depression.

### For More Information

For more information on conditions that affect mental health, resources, and research, go to **MentalHealth.gov** at [www.mentalhealth.gov](http://www.mentalhealth.gov), or the NIMH website at [www.nimh.nih.gov](http://www.nimh.nih.gov). In addition, the National Library of Medicine's MedlinePlus service ([www.nlm.nih.gov/medlineplus/](http://www.nlm.nih.gov/medlineplus/)) has information on a wide variety of health topics, including conditions that affect mental health.

If you do not have Internet access and would like more information on the teen brain, please contact the NIMH Information Resource Center at 1-866-615-6464 or 1-866-415-8051 (TTY toll-free).

### Reprints:

This publication is in the public domain and may be reproduced or copied without permission from NIMH. Citation of the National Institute of Mental Health as a source is appreciated. We encourage you to reproduce it and use it in your efforts to improve public health. However, using government materials inappropriately can raise legal or ethical concerns, so we ask you to use these guidelines:

- NIMH does not endorse or recommend any commercial products, processes, or services, and our publications may not be used for advertising or endorsement purposes.
- NIMH does not provide specific medical advice or treatment recommendations or referrals; our materials may not be used in a manner that has the appearance of providing such information.
- NIMH requests that organizations not alter our publications in ways that will jeopardize the integrity and “brand” when using the publication.

- The addition of logos and Web site links may not have the appearance of NIMH endorsement of any specific commercial products or services or medical treatments or services.
- If you have questions regarding these guidelines and use of NIMH publications, please contact the NIMH Information Center at 1-866-615-6464 or e-mail [nimhinfo@nih.gov](mailto:nimhinfo@nih.gov).

The photos in this publication are of models and are used for illustrative purposes only.

### National Institute of Mental Health

Office of Science Policy, Planning and Communications  
Science Writing, Press, and Dissemination Branch  
6001 Executive Boulevard  
Room 6200, MSC 9663  
Bethesda, MD 20892-9663  
Phone: 301-443-4513 or Toll-free: 1-866-615-NIMH (6464)  
TTY: 301-443-8431 or TTY Toll-free: 1-866-415-8051  
Fax: 301-443-4279  
E-mail: [nimhinfo@nih.gov](mailto:nimhinfo@nih.gov)  
Web site: [www.nimh.nih.gov](http://www.nimh.nih.gov)



National Institute  
of Mental Health



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health  
NIH Publication No. 19-MH-8078